

SITE INSPECTION REPORT
WESTBANK ASBESTOS
MARRERO, JEFFERSON PARISH, LOUISIANA
EPA CERCLA ID NO.: LAD985170711

Prepared for:

U.S. Environmental Protection Agency
Region VI
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March 1995

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SITE INSPECTION REPORT

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SECTION 1 INTRODUCTION

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), Roy F. Weston, Inc. (WESTON) has completed a Site Inspection (SI) of the Westbank Asbestos site (EPA CERCLA Identification Number LAD985170711) located in Marrero, Jefferson Parish, Louisiana (see Figure 1-1). The U.S. Environmental Protection Agency (EPA) Region VI retained WESTON to complete this investigation under EPA Contract Number 68-W9-0015 and Work Assignment Number 23-6JZZ.

This document represents the final report for the SI. The purpose of this report is to provide the background information collected for the site, discuss the SI sampling activities, and present the analytical data obtained as part of the investigation.

1.1 OBJECTIVES OF THE INVESTIGATION

The SI is generally the second screening investigation in a series of site assessments that EPA may complete at a known or potential hazardous waste site that is being investigated under CERCLA/SARA prior to its possible inclusion on the National Priorities List (NPL). The SI has two primary objectives:

- To identify Hazardous Waste Source Areas (HWSAs) at the site, attempt to document the presence of hazardous substances in the HWSAs, and evaluate the threat that migration or exposure to the hazardous substances may pose in each of the pathways of contaminant migration and exposure.
- To collect information that can be used to assess the site using EPA's Hazard Ranking System (HRS) to help determine whether further investigation under CERCLA/SARA is warranted in order to pursue listing of the site on the NPL.

EPA will use the information obtained during the SI to help prioritize further work for the site. Based on the results of the SI, EPA may rank the site on the NPL, decide that additional investigation of the site is required, or assign a No Further Remedial Action Planned (NFRAP) status to the site.

1.2 SCOPE OF WORK

The SI is a screening investigation of the site. The SI Scope of Work is, therefore, centered on characterizing the site through the completion of limited site-related research, site reconnaissance, and focused sampling activities. As part of this SI, WESTON performed the following major tasks:

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- An on-site reconnaissance was performed to document current site conditions and identify potential sources of hazardous substances at the site. As part of the reconnaissance, a survey of the site's vicinity was completed to identify potential receptors, or targets, of hazardous substance migration and exposure attributable to the site.
- A site-specific Task Work Plan (TV/P) and Health and Safety Plan (HASP) were prepared to provide a detailed plan of action for subsequent SI sampling activities.
- Information concerning the environmental setting of the site was obtained to describe the groundwater, surface water, soil exposure, and air pathways.
- Available regulatory compliance files from federal, state, and local government agencies were reviewed, and telephone interviews were conducted with authorities knowledgeable of the site and its surroundings.
- Samples were collected in suspected pathways of contaminant migration and exposure. The samples were collected in general accordance with the site-specific TWP and HASP to document the presence and migration of hazardous substances attributable to the site.
- All of the available information from on-site observations, records review, interviews, site environmental and demographic characteristics, and historical sample analyses were reviewed and tabulated.
- The analytical data generated from the SI samples that were sent to WESTON-designated laboratories for analysis were reviewed and tabulated.
- This report was prepared to present the findings of the SI.

1.3 REPORT FORMAT

The SI Report is presented in a format that is intended to facilitate evaluation of the site using the HRS. The report contains the following sections:

- Section 1 — Introduction,
- Section 2 — Site Characteristics,
- Section 3 — Waste Source Characterization,
- Section 4 — Groundwater Pathway,
- Section 5 — Surface Water Pathway,
- Section 6 — Soil Exposure,
- Section 7 — Air Pathway,
- Section 8 — Conclusions, and
- Section 9 — References.

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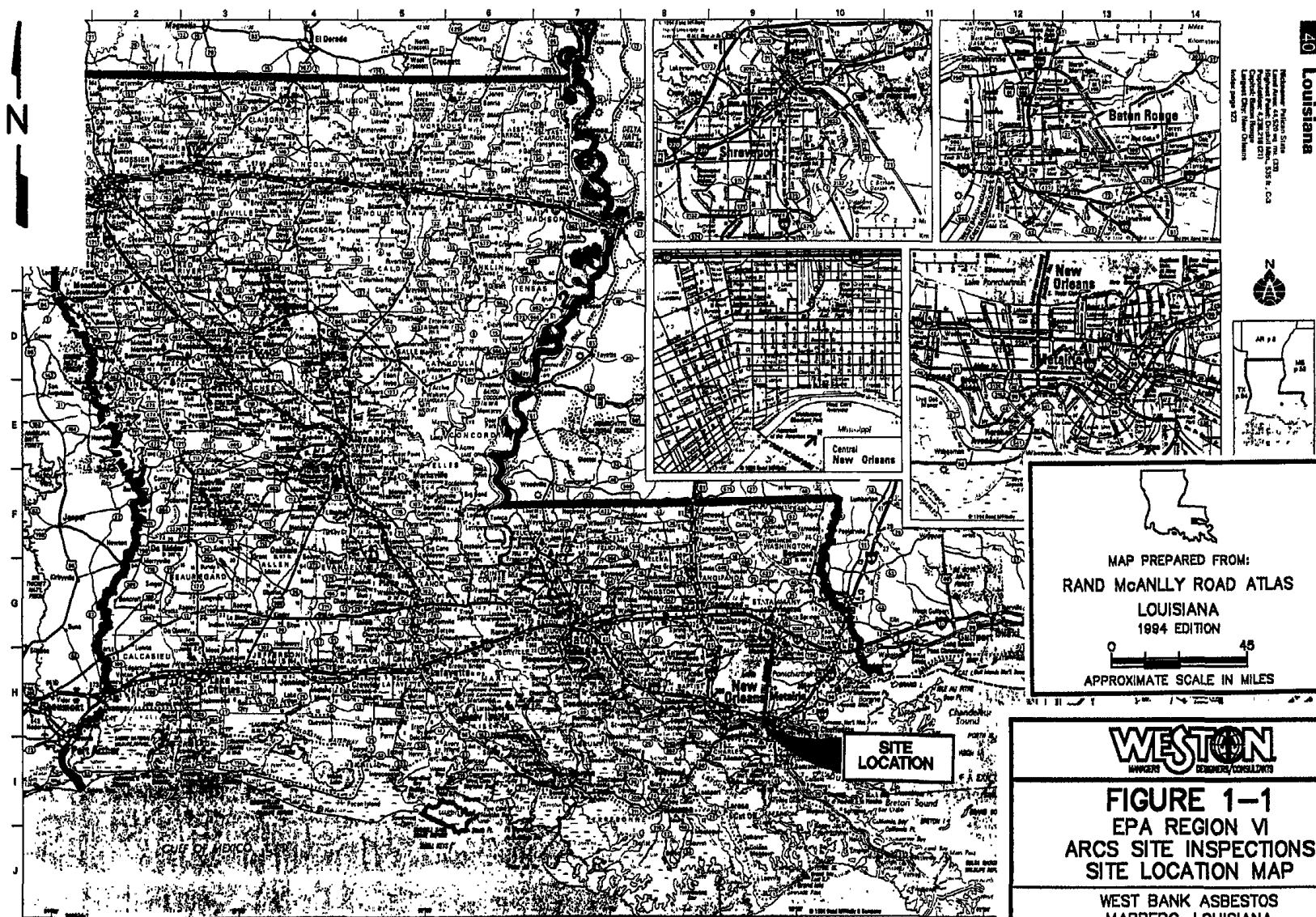
Additional information is provided in the appendices following the text of the report. The appendices are as follows:

- Appendix A - Photographs,
- Appendix B - Data Package, and
- Appendix C - References.

The figures and tables referred to throughout the report are provided following the text of each section.

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SECTION 2 SITE CHARACTERISTICS

WESTON collected and reviewed available background information regarding the location, ownership, description, operational history, site regulatory compliance, and nearby land use of the site. The discussion in this section of the report is based on this background information, which is referenced throughout the text.

2.1 SITE DESCRIPTION AND BACKGROUND INFORMATION

The following characteristics of the site are summarized in this subsection of the report:

- Site location,
- Site ownership,
- Site description,
- Site operational history,
- Site regulatory compliance history, and
- Nearby land use.

2.1.1 Site Location

The site location has been identified based on previous investigations and observations made during the site reconnaissance and SI sampling visits as recorded in the SI field logbook (Reference 1).

The Westbank Site is located in Marrero, Jefferson Parish, Louisiana, and covers approximately 1,920 acres. The geographic coordinates of the estimated boundaries of the site are approximately:

- | | |
|---|---|
| ● <u>Northwest corner</u>
North 29°55'04" latitude
West 90°08'33" longitude | ● <u>Northeast corner</u>
North 29°53'55" latitude
West 90°06'02" longitude |
| ● <u>Southwest corner</u>
North 29°54'08" latitude
West 90°09'05" longitude | ● <u>Southeast corner</u>
North 29°53'41" latitude
West 90°06'00" longitude |

A Site Area Map is provided as Figure 2-1.

The site can be reached by traveling east on U.S. Highway 90 Business (US Hwy 90) from New Orleans across the Mississippi River (from Orleans to Jefferson Parish). Continue east, then south, and eventually west on US Hwy 90 (also known as the Westbank Expressway). The approximate southeast corner of the site begins at the intersection of US Hwy 90 and Barataria Boulevard (Reference 1). Bordering the site are 4th Street to the north, Barataria Boulevard to the east, the Westbank Expressway to the south, and Avenue A to the west.

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2.1.2 Site Ownership

In November 1993, WESTON contacted Bob Roth, District Maintenance Engineer, at P.O. Box 9180, Bridge City, Louisiana (phone number 504-436-9100) and Harold Schomaker, Director of Jefferson Parish Streets Department, at 1901 Ames, Marrero, Louisiana (phone number 504-349-5800). Mr. Roth signed an EPA Access Agreement on 3 December 1993, allowing WESTON access to the state rights-of-way associated with the site, if any. In addition, Mr. Schomaker signed an EPA Access Agreement on 6 December 1993, allowing WESTON access to streets and rights-of-way within the jurisdiction of Jefferson Parish. Copies of the site access letters and access agreements are provided as Reference 2.

2.1.3 Site Description

WESTON conducted a site reconnaissance on 1 April 1994. WESTON performed the reconnaissance in general accordance with the following documents:

- WESTON's Generic SI Work Plan (Document Control No. 4603-23-0008), 15 August 1991),
- The site-specific HASP prepared by WESTON for the SI and sent to EPA for approval prior to the SI sampling visit, and
- The EPA *Guidance for Performing Site Inspections Under CERCLA*, September 1992.

During the site reconnaissance, two WESTON personnel visited the site, walked around on the property, recorded observations in a logbook (Reference 1), and took photographs to document site conditions (Appendix A). Known or potential sources of hazardous substances at the site were identified, located on a map, and described. The area surrounding the site was examined to identify potential receptors, or targets, of hazardous substance migration from the site. Nearby land use and potential alternative source sites were also documented.

The site is composed of numerous driveways and rights-of-way upon which asbestos-containing waste material containing up to 60% asbestos was laid (References 3 and 4). The site, which measures approximately 3 miles long and 1 mile wide, includes a residential community and several schools, churches, and small businesses.

2.1.4 Site Operational History

A Johns-Manville plant operated in Marrero, Louisiana, between 1955 and 1965. The plant produced various types of asbestos-containing materials (ACMs) with the principle product being asphalt roofing material. An ACM by-product was generated by the plant. The by-product, in aggregate form, was pulverized in a hammer mill and mixed with a filler to form a roadbed-like material. This aggregate was then offered to local residents and governments (in the area that comprises the site) for driveways and rights-of-way construction at no charge (Reference 5).

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Consequently, many driveways and rights-of-way in the surrounding neighborhood contain this waste material.

2.1.5 Site Regulatory Compliance History

WESTON reviewed available files from regulatory agencies to collect background information regarding the regulatory compliance history of the site. Based on available information, the following previous investigations are known to have been completed for the site:

- A sampling visit was performed at the site by the Louisiana Department of Environmental Quality (LDEQ) on 12 January 1990. The sampling visit consisted of collecting one air sample using a high-volume air sampler and ten bulk samples of suspected ACM. Analysis of the air sample indicated the presence of 0.000003 fibers per cubic centimeter (f/cc), which is below the EPA action level of 0.1 f/cc. Analyses of the bulk samples revealed the presence of up to 60% asbestos (chrysotile and crocidolite) (Reference 4).
- Drive-by inspections were performed at the site and in nearby cities (including Gretna and Westwego, Louisiana) by the EPA Technical Assistance Team (TAT) on 8 and 28 February and 7 and 8 March 1990. The TAT observed conditions at the inactive Johns-Manville plant and an active pipeyard that was constructed on top of an abandoned Johns-Manville landfill. The TAT observed possible ACM cropping out in the ditch below the pipeyard along River Road. In addition, the TAT inspected two other landfills that were used by the plant; one was north of the plant and the other was located on LaPalco Boulevard (unknown city). The TAT observed potential ACM at the surface in the landfill located at LaPalco Boulevard. This ACM appeared to be in three forms: a black asphalt-like material, a light gray to off-white fibrous material, and variegated transite floor and siding tiles (Reference 5).
- A sampling event during which only air samples were collected was conducted by the TAT at the site from 7 to 9 March 1990. Analytical results indicated that all samples were below the detection limit of 0.001 f/cc (Reference 5).
- A Preliminary Assessment (PA) was completed by ICF Technology, Inc. on 16 October 1992. The PA Report summarized the site history and previous investigations performed at the site and stated that the air and soil pathways were concerns at the site based on the deposition of ACM at the site in relation to the on-site residents (Reference 6).

2.1.6 Nearby Land Use

Land use in the vicinity of the site was observed during the SI site reconnaissance and sampling visits (Reference 1). The site is in a predominantly residential area. Land use adjacent to the site is described as follows:

- The site is bordered immediately to the north by 4th Street. Numerous small commercial businesses, large industrial facilities, and the Mississippi River are located further north of the site.
- The site is bordered immediately to the east by Barataria Boulevard. Residences, schools, and miscellaneous businesses are located further east of the site.
- The site is bordered immediately to the south by the Westbank Expressway. Residences and miscellaneous businesses are further south of the site.
- The site is bordered to the west by Avenue A. Residences are located further west of the site.

2.2 HAZARDOUS WASTE SOURCE AREAS AND SITE CONCERNS

The known and potential HWSAs identified at the site are described in this subsection along with site-related concerns regarding the migration of hazardous substances, attributable to the site, through the groundwater, surface water, soil exposure, and air pathways.

2.2.1 Known and Potential Hazardous Waste Source Areas

Based on available background information and the results of WESTON's site reconnaissance, two HWSAs have been identified at the site, and are described as areas of asbestos contamination. The HWSAs include residential properties located within the site's estimated boundaries. The properties are each assumed to measure 100 feet wide and 100 feet long, or 10,000 square feet.

In addition, there are other potential HWSAs onsite which include the site's streets, driveways, and rights-of-way, and measure approximately 1,670,000 square feet, or an estimated 2 percent of the site's 3 square mile area.

2.2.2 Site Concerns

The migration of hazardous substances from the site and the exposure of humans and other environmental receptors to the hazardous substances are of concern. Possible concerns associated with the HWSAs at the site and the migration through the groundwater, surface water, soil exposure, and air pathways of hazardous substances attributable to the site include the following:

- The presence of hazardous substances at the site is of general concern. Refer to Section 3 of this report for more information.
- The groundwater pathway is of no concern based on the type of HWSA present at the site. In addition, there are no drinking water wells within 4 miles of the site, and the nearby population is supplied drinking water from intakes located along the Mississippi River. Refer to Section 4 for a discussion of the groundwater pathway.
- The surface water pathway is of no concern based on the type of HWSA present at the site. In addition, runoff from the area drains through an underground drainage system into a canal (approximately 1.3 miles from the site), where it is directed south and eventually into the Gulf of Mexico. Refer to Section 5 for a discussion of the surface water pathway.
- Soil exposure is of no concern based on asbestos posing no threat to individuals or the environment from dermal exposure. Refer to Section 6 for a discussion of the soil exposure pathway.
- A release to the air pathway is of concern because of the condition of the ACM, and two releases of airborne asbestos have been observed. The majority of the ACM is contained by cement and other paving materials. However, the ACM may deteriorate and become friable (Reference 3). Refer to Section 7 for a discussion of the air pathway.

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SECTION 3

WASTE SOURCE CHARACTERIZATION

Information regarding waste source characterization of the HWSAs identified at the site is summarized in this section.

3.1 WASTE SOURCE SAMPLING AND ANALYSIS

In general accordance with the objectives of the SI, WESTON implemented a sampling strategy primarily aimed at documenting the presence of hazardous substances at the Westbank Asbestos site. WESTON collected air samples at the site on 3 to 5 October 1994. WESTON completed the sampling activities in general accordance with the site-specific TWP and HASP, as well as the other documents listed in Subsection 2.1.3.

The sampling activities and analytical results associated with the waste source characterization are summarized in this subsection of the report. The sampling activities and related analytical results applicable to the evaluation of the migration and exposure pathways are summarized in the subsequent pathway sections of the report.

3.1.1 Waste Source Sampling

Each of the streets, driveways, and rights-of way within the site boundaries were initially identified as potential HWSAs. It is estimated that these areas account for approximately 2 percent of the total site area of 3 square miles, or 1,670,000 square feet.

WESTON collected 18 air samples (AS-1 through AS-18) in an effort to document the presence of hazardous substances associated with the potential HWSAs. The prefix "AS" was assigned to the respective station number of each air sample. Based on the analytical results (provided in Appendix B and summarized in Table 7-2), HWSAs have been identified at two properties onsite. These two areas are an estimated 10,000 square feet based on each property being 100 feet wide and 100 feet long. It should be noted that asbestos was not detected onsite at concentrations above the EPA action level of 0.1 f/cc.

Sample locations are shown in Figure 3-1. SI waste source air sample locations, descriptions, and rationales are summarized in Table 3-1. The analytical results for the air samples collected as part of this SI are summarized in Table 7-2.

3.1.2 Laboratory Analysis

WESTON shipped all samples collected during the SI to WESTON-designated laboratories by Federal Express Priority Overnight Service. Samples were sent to RJ Lee Group, Inc., Houston, Texas, and analyzed for asbestos.

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3.2 WASTE SOURCE ANALYTICAL RESULTS

The analytical data available to characterize the sources of hazardous substances identified at the site are summarized in the following subsections.

3.2.1 Waste Source Analytical Results from Previous Investigations

On 12 January 1990, a sampling visit was performed at the site by LDEQ. The sampling visit consisted of collecting one air sample using a high-volume air sampler and ten bulk samples of suspected ACM. Analysis of the air sample indicated the presence of 0.000003 f/cc, which is below the EPA action level of 0.1 f/cc. Analyses of the bulk samples revealed the presence of up to 60% asbestos (chrysotile and crocidolite) (Reference 4).

A sampling event during which only air samples were collected was conducted by the TAT at the site from 7 to 9 March 1990. Analytical results indicated that all samples were below the detection limit of 0.001 f/cc (Reference 5).

3.2.2 SI Waste Source Analytical Results

No bulk samples were collected by WESTON as part of this SI.

3.3 WASTE SOURCE CHARACTERIZATION CONCLUSIONS

Analytical results of bulk samples collected from the site during previous investigations have documented the presence of up to 60 percent asbestos. No bulk samples were collected as part of the SI sampling activities. Based on air samples that were collected, two HWSAs were identified measuring a total of approximately 20,000 square feet.

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TABLE 3-1

SI SAMPLE LOCATIONS, DESCRIPTIONS, AND RATIONALES

STATION NUMBER	SAMPLE LOCATION* AND DESCRIPTION	RATIONALE
AS-1	Air sample collected on the levee at the intersection of Avenue B and River Road.	To document background air levels.
AS-2	(b) (6)	To document observed contamination in the air exposure pathway.
AS-3		To document observed contamination in the air exposure pathway.
AS-4		To document observed contamination in the air exposure pathway.
AS-5		To document observed contamination in the air exposure pathway.
AS-6		To document observed contamination in the air exposure pathway.
AS-7		To document background air levels.
FS-1		Field blank sample collected for laboratory quality control (QC).
AS-8		To document observed contamination in the air exposure pathway.
AS-9		To document observed contamination in the air exposure pathway.

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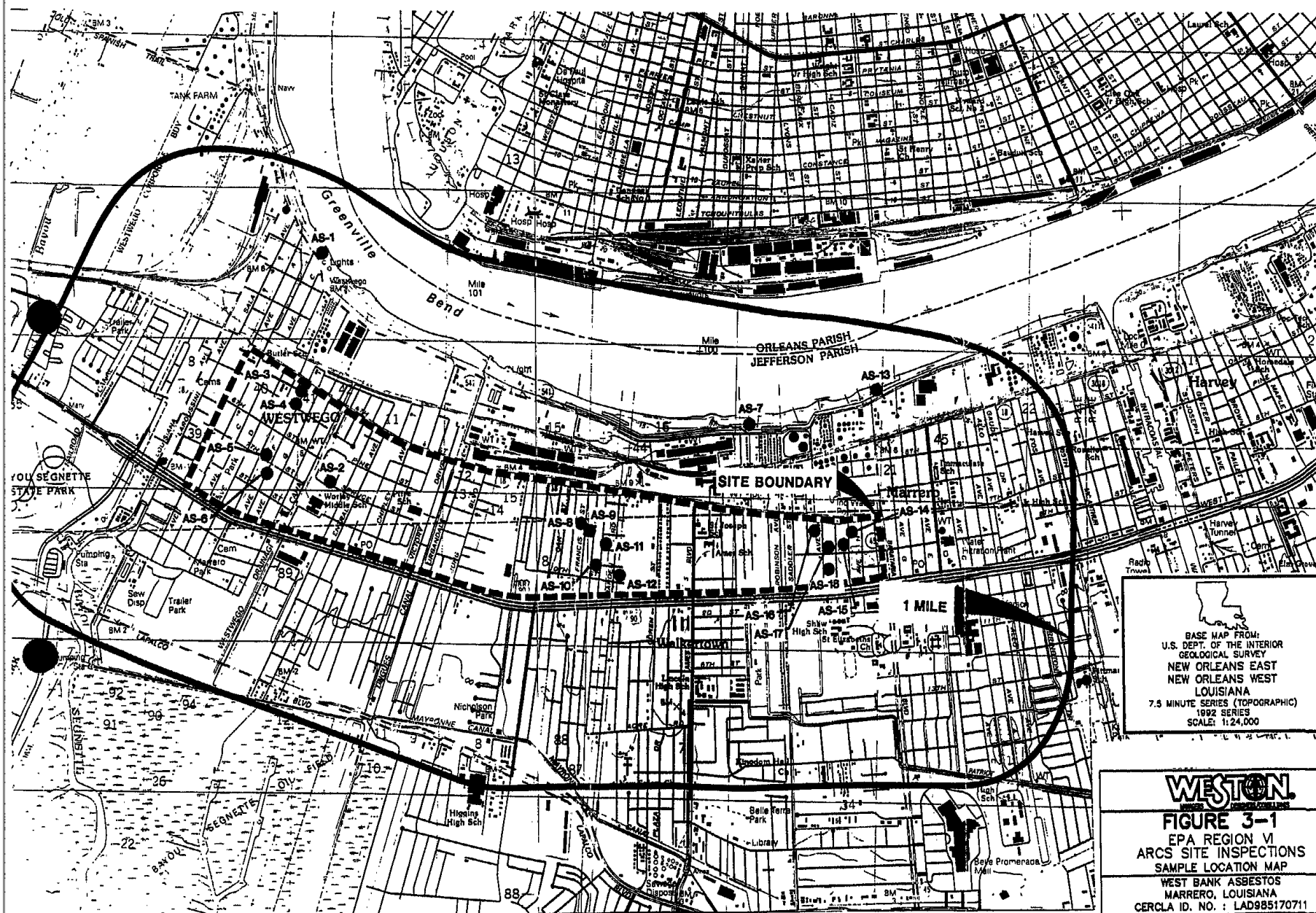
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**TABLE 3-1
SI SAMPLE LOCATIONS, DESCRIPTIONS, AND RATIONALES
(continued)**

STATION NUMBER	SAMPLE LOCATION* AND DESCRIPTION	RATIONALE
AS-10	(b) (6)	To document observed contamination in the air exposure pathway.
AS-11		To document observed contamination in the air exposure pathway.
AS-12		To document observed contamination in the air exposure pathway.
AS-13		To document background air levels.
FS-2		Field blank sample collected for laboratory quality control (QC).
AS-14		To document observed contamination in the air exposure pathway.
AS-15		To document observed contamination in the air exposure pathway.
AS-16		To document observed contamination in the air exposure pathway.
AS-17		To document observed contamination in the air exposure pathway.
AS-18		To document background soil levels.

*Refer to Figure 3-1 for sample locations.

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SECTION 4 GROUNDWATER PATHWAY

A discussion of the groundwater pathway, one of four major pathways of potential hazardous waste migration assessed in this report, is provided in this section. The discussion focuses on the aquifer characteristics of the region, the likelihood of a release to groundwater, and the potential targets of hazardous waste migration through the groundwater pathway.

The regional and local geology and the groundwater conditions at the site are discussed in this section.

4.1 HYDROGEOLOGIC SETTING

The New Orleans area is situated on low-lying land formed by the deltaic accumulations of the Mississippi River (Reference 7). The area is underlain by natural levee deposits, as well as peat and muck deposits, and interdistributary trough fill and tidal deposits.

The Westbank site is located on the Quaternary-age alluvium, which was deposited by the Mississippi River. The New Orleans Aquifer System lies beneath the alluvium and is composed of a complex series of alternating interbedded clay and sand beds that forms four aerially extensive aquifers. From youngest to oldest, the aquifers are the Gramercy, Norco, Gonzales-New Orleans, and "1,200-foot" aquifers. Generally, these aquifers are separated by confining units of clay. Although freshwater is locally available near the shore of Lake Pontchartrain in northwestern Jefferson Parish, from the Norco Aquifer, the Gonzales-New Orleans Aquifer is the only major source of fresh groundwater (Reference 8).

4.2 LIKELIHOOD OF RELEASE

This subsection presents important factors related to the likelihood of a release to groundwater from a source of hazardous substances at the site.

4.2.1 Depth to Groundwater

The depth to groundwater in the area varies from 1 to 4 feet from December through April (Reference 9).

4.2.2 Depth of Contamination

The depth of contamination at the site is unknown.

4.2.3 Annual Precipitation

The annual precipitation in the area of the site is 56 inches (Reference 10).

4.2.4 Thickness of Impermeable Layers

An impermeable layer between the surface and groundwater has not been determined.

4.2.5 Hydraulic Conductivity of Impermeable Layers

The presence of a low-permeability layer between the shallow groundwater and the potential HWSAs at the site has not been established; therefore, a hydraulic conductivity value cannot be assigned.

4.2.6 Groundwater Analytical Results from Previous Investigations

No groundwater analytical data from previous investigations are known to exist.

4.2.7 SI Groundwater Sampling and Analytical Results

WESTON collected no groundwater samples as part of this SI.

4.3 GROUNDWATER PATHWAY TARGETS

The potential receptors, or targets, of the groundwater pathway include the population and resources that rely on local aquifers as a source of water supply. The targets identified for the groundwater pathway are discussed in the following subsections.

4.3.1 Nearest Well

Groundwater wells within 4 miles of the site are generally used for irrigation, industrial purposes, and monitoring of underground contaminants (Reference 11). The closest groundwater well to the site is approximately 2 miles to the north; however, no public drinking water wells are known to exist within a 4-mile radius of the site. Residents of the City of New Orleans, Jefferson Parish, and other surrounding communities receive potable water from intakes located along the Mississippi River (Reference 12).

4.3.2 Well Head Protection Areas

No Well Head Protection Areas (WHPAs) have been identified within a 4-mile radius of the site.

4.3.3 Groundwater Resources

Groundwater is used for irrigation and industry within a 4-mile radius of the site.

4.4 GROUNDWATER PATHWAY CONCLUSIONS

A release of hazardous substances to groundwater pathway is of no concern for the following reasons:

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- The potential for asbestos to migrate is unlikely because mobility of asbestos in groundwater is low (Reference 13).
- A release to the groundwater pathway has not been documented at the Westbank Asbestos site.
- No groundwater drinking water targets have been identified within a 4-mile radius of the site.

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SECTION 5

SURFACE WATER PATHWAY

Surface water is the second of four pathways of potential hazardous waste migration assessed for the site. This section provides a discussion of the types of surface water draining the site, the probable point of entry (PPE) for a hazardous substance from the site to enter surface water, the likelihood of a release, and the potential targets of the pathway.

5.1 HYDROLOGIC SETTING

Surface water at the site flows through an overland flow segment, enters the surface water at the PPE, and flows downstream. These segments of the surface water pathway are discussed in the following subsections.

5.1.1 Overland Flow Segment

Surface water runoff from the site is directed toward and into the Avenue D underground canal, which is located approximately 1,200 feet east of the site.

5.1.2 Probable Point of Entry

The PPE from a source at the site to a perennial-flowing surface water body occurs at the confluence of the Avenue D underground canal and the Patriot Canal (a perennial-flowing open ditch) approximately 1.2 miles south of the site.

5.1.3 Surface Water Flow Path

Water flows in the Patriot Canal approximately 1.3 miles trending in an easterly direction until it reaches the pumping station at the junction of Patriot Canal and the Intracoastal Waterway (Harvey Canal No. 1). Surface water then discharges into the Bayou Barataria and eventually into the Gulf of Mexico approximately 17 miles downstream (Reference 14).

5.2 LIKELIHOOD OF RELEASE

This subsection presents important factors related to the likelihood of a release to surface water from a source of hazardous substances at the site.

5.2.1 Distance to Surface Water

The shortest distance from a known or potential source of hazardous substances at the site to a perennial-flowing surface water body is approximately 1.2 miles.

5.2.2 Flood Frequency

The site is located on the west bank of the Mississippi River and is situated in the 100-year and 500-year floodplains (Reference 15).

5.2.3 2-Year, 24-Hour Rainfall

The 2-year, 24-hour rainfall for the area of the site is approximately 5.5 inches (Reference 16).

5.2.4 Flood Containment

The hazardous substance source areas at the site have no containment features that would prevent or contain a release in the event that the sources become flooded.

5.2.5 Analytical Results from Previous Investigations

No surface water analytical data from previous investigations are known to exist.

5.2.6 SI Surface Water/Sediment Sampling and Analytical Results

WESTON collected no surface water or sediment samples as part of this SI.

5.3 SURFACE WATER PATHWAY TARGETS

The potential targets of the surface water pathway include the population relying on surface water downstream of the PPE as a source of drinking water, as well as the downstream fisheries, sensitive environments, and surface water resources. The targets identified within the surface water pathway are discussed in the following subsections.

5.3.1 Drinking Water Intakes

No surface water intakes have been identified along the 15-mile downstream target distance limit (TDL). The cities of Marrero, Harvey, Westwego, Gretna, Waggaman, Avondale, Lafitte, Kenner, and Harahan in Jefferson Parish, as well as all of Orleans and St. Bernard Parish, are served by water intakes located in the Mississippi River (References 17, 18, and 19).

5.3.2 Wetlands and Other Sensitive Environments

No state or federal parks or wildlife sanctuaries were identified within the 15-mile TDL (Reference 20). However, there is the potential for the state-protected paddle fish and Pallid sturgeon to reside in the water throughout the site area (Reference 21). The total length of wetland frontage along the 15-mile TDL has not been determined.

The Arctic peregrine falcon, brown pelican, and piping plover are endangered species listed for Jefferson Parish (Reference 22). The habitats for these species represent sensitive environments; however, no such environments have been observed on-site.

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5.3.3 Fisheries

The Westbank site lies in the Barataria Basin. According to the Louisiana Water Quality Standards (Louisiana Administrative Code, Title 33, Chapter 11), the designated uses for this basin include primary and secondary contact and fish and wildlife propagation. It is unknown if recreational fishing takes place along portions of the 15-mile TDL (Reference 6).

5.3.4 Resources

No resources are known to be present within the surface water pathway.

5.4 SURFACE WATER PATHWAY CONCLUSIONS

A release of hazardous substances to surface water pathway is of no concern for the following reasons:

- The two HWSAs identified at the site are not likely to enter perennially flowing water through overland flow based on the distance to surface water (approximately 1.2 miles) and the state of deposition (asphalt) of the ACM on-site.
- No drinking water targets have been identified within the 15-mile TDL.

SECTION 6 SOIL EXPOSURE

Soil exposure is another potential route of exposure to hazardous substances attributable to the site. The discussion in this section focuses on important soil exposure factors such as soil type, area of contamination, accessibility and the likelihood of exposure, and the potential targets.

6.1 SURFICIAL CONDITIONS

Information regarding the surficial conditions at the site is summarized in this subsection.

6.1.1 Soil Type

The site is located on the soils of the Vacherie series. This soil series consists of gently undulating, somewhat poorly drained, very slowly permeable soils. These soils formed in loamy alluvium over clayey alluvium (Reference 9). The site has mostly been improved with streets, houses, commercial developments, and schools.

6.1.2 Areas of Contamination

Asbestos has been positively identified in material used to construct rights-of-way and driveways in the Westbank area (Reference 4). The majority of the ACM is covered with concrete or asphalt (Reference 3); however, significant amounts of ACM may be available to the soil exposure pathway through the deterioration of the asphalt and concrete. A release of asbestos to the soil has been documented based on the analytical results of bulk samples collected during previous investigations (References 3, 4). In addition, airborne asbestos has been documented in two areas measuring a total of approximately 20,000 square feet onsite. Up to an additional 2 percent of the total site area, or 1,670,000 square feet, may also have been impacted with ACM.

6.2 LIKELIHOOD OF EXPOSURE

The following subsections present important factors related to the likelihood of exposure to an area of contaminated soil or direct contact with another source of hazardous substances at the site.

6.2.1 Attractiveness of the Site

The site is predominantly composed of a residential neighborhood and contains several schools, churches, and business.

6.2.2 Site Accessibility

The areas of suspected soil contamination are accessible to residents and the general public.

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6.2.3 Soil Analytical Results from Previous Investigations

No analytical data from previous investigations are known to exist.

6.2.4 SI Soil Sampling and Analytical Results

WESTON collected no soil samples as part of this SI.

6.3 SOIL EXPOSURE TARGETS

The resident population living or working in areas of soil contamination, the population living near areas of soil contamination, designated recreational areas, and terrestrial resources such as agriculture are potential targets of soil exposure. The soil exposure targets identified are summarized in the following subsections.

6.3.1 Resident Population

The resident population includes those persons in houses, schools, or daycare facilities who are located on a property where soil contamination attributable to the site has been documented and whose residence is within 200 feet of contamination.

Although it has not been confirmed, it is possible that all persons living on-site can be considered part of the resident population due to the reported use (driveways, rights-of ways, etc.) and placement of ACM throughout the site. The SI analytical results indicate that the resident population is approximately 6 people based upon airborne asbestos being present at two residential properties onsite with an estimated household population of 2.68 or 3 people per house (Reference 23).

6.3.2 Nearby Population

The nearby population includes persons who live within 1 mile of areas of soil contamination attributable to the site. Those persons in houses, schools, or daycare facilities within 1 mile of the site have been considered part of the nearby population.

Based on available 1990 Census information (Reference 23), there are approximately 2.68 persons per household living in the area of the site. The population within 0 to ¼ mile is approximately 7,999, within ¼ to ½ mile is approximately 8,614, and within ½ to 1 mile is approximately 14,354 (Reference 24). This estimation does not include the 7,291 students that attend the nine schools within a 1-mile travel radius of the site or schools and residents within the site boundary. The population distribution around the site is summarized in Table 6-1.

6.3.3 Sensitive Environments

Endangered species located in the region are discussed in Subsection 5.3.2. The critical habitats of these species represent terrestrial sensitive environments; however, no critical habitats are known to be present on-site.

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6.3.4 Resources

Land use within 4 miles of the site is considered to be residential and industrial.

6.4 SOIL EXPOSURE CONCLUSIONS

Soil exposure is not believed to be of concern since the HWSAs present onsite consist of asbestos which poses no dermal threat to individuals or the environment.

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SITE INSPECTION REPORT

**WESTBANK ASBESTOS
MARRERO, JEFFERSON PARISH, LOUISIANA
EPA CERCLA ID NO. LAD985170711**

TABLE 6-1

NEARBY POPULATION

DISTANCE INTERVAL (miles)	REPORTED POPULATION	REFERENCES
0 to 0.25	7,999 people	24
0.25 to 0.50	8,614 people	24
0.50 to 1	14,354 people	24

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SECTION 7 AIR PATHWAY

The discussion in this section of the report focuses on the air pathway, another potential route of hazardous substance migration from the site. Atmospheric conditions, the likelihood of a release to air, and potential air pathway targets are identified below.

7.1 METEOROLOGICAL CONDITIONS

The meteorological conditions at the site were obtained from the U.S. Department of Commerce, *Climatic Atlas of the United States* (Reference 10) and are summarized as follows:

- The average annual temperature is approximately 68°F.
- The mean annual total precipitation is approximately 56 inches.
- The prevailing wind direction changes seasonally; wind roses are provided in Reference 10.

7.2 LIKELIHOOD OF RELEASE

Information concerning a release to the air pathway is summarized in this subsection.

7.2.1 Air Quality Results from Previous Investigations

A sampling visit was performed at the site by LDEQ on 12 January 1990. The sampling visit consisted of collecting one air sample using a high-volume air sampler and ten bulk samples of suspected ACM. Analysis of the air sample indicated the presence of 0.000003 f/cc, which is below the EPA action level of 0.1 f/cc. Analyses of the bulk samples revealed the presence of up to 60% asbestos (chrysotile and crocidolite) (Reference 4).

A sampling event during which air samples were collected was conducted by the TAT at the site from 7 to 9 March 1990. Analytical results indicated that all samples were below the detection limit of 0.001 f/cc (Reference 5).

7.2.2 SI Air Sampling and Analytical Results

As part of WESTON's sampling activities, the site was divided into three quadrants. Each quadrant was independently sampled on three consecutive days. Five sampling points located on different privately owned properties were randomly selected from each quadrant. In addition, three offsite sampling points (one for each day of sampling) were randomly selected upwind of the onsite locations, and near the quadrant which was being sampled on that given day.

A total of twenty air samples (including two field blanks) were collected on 25 millimeter, 0.45 micrometer filter cassettes as part of the SI using low volume (approximately 2 liters per minute)

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air samplers. The analytical results for the 20 air samples (AS-1 through AS-18, FS-1, FS-2) are useful to evaluate potential air exposure near the potential HWSAs. Only two samples (shown in Table 7-1) had asbestos detected at concentrations above the laboratory detection limit. Both of these concentrations, 0.0113 f/cc and 0.0115 f/cc, are significantly lower than the EPA action level of 0.1 f/cc. The analytical data report is provided in Appendix B.

7.3 AIR PATHWAY TARGETS

The population, resources, and sensitive environments within 4 miles of the site are potential targets of a release of hazardous constituents to the air pathway. The targets identified for the air pathway are discussed in the following subsections.

7.3.1 Population Within 4 Miles

Using EPA's Geographic Exposure Modeling System (GEMS) and other 1990 Census data, WESTON identified the approximate population residing in specific distance intervals within approximately 4 miles of the site's estimated southeast corner. This population is summarized in Table 7-2.

7.3.2 Sensitive Environments

Sensitive environments have been identified previously in this report in Subsection 5.3.2.

7.3.3 Resources

Resources that may be targets of the air pathway have been identified in Subsections 4.3, 5.3, and 6.3.

7.4 AIR PATHWAY CONCLUSIONS

A release of hazardous substances to the air pathway is of limited concern. Although airborne asbestos has been detected at the site, the concentrations were significantly less than the EPA action level of 0.1 f/cc.

SITE INSPECTION REPORT

**WESTBANK ASBESTOS
MARRERO, JEFFERSON PARISH, LOUISIANA
EPA CERCLA ID NO. LAD985170711**

TABLE 7-1

SI LABORATORY ANALYTICAL RESULTS

BACKGROUND RESULTS		SAMPLE LOCATIONS AND ANALYTICAL RESULTS	
STATION NO. AS-8		STATION NO. AS-9	STATION NO. AS-16
Background (f/cc)	3 x Background (f/cc)	Concentration (f/cc)	Concentration (f/cc)
< 0.0055	N/A	0.0113	0.0115

N/A - Not Applicable

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SITE INSPECTION
WESTBANK ASBESTOS
MARRERO, JEFFERSON PARISH, LOUISIANA
EPA CERCLA ID NO. LAD985170711

TABLE 7-2
POPULATION WITHIN 4 MILES

DISTANCE INTERVAL (miles)	REPORTED POPULATION	REFERENCES
Onsite	6 people	3, 23
0 to 0.25	7,999 people	24
0.25 to 0.50	8,614 people	24
0.50 to 0.75	4,227 people	24
0.75 to 1.0	10,127 people	24
1 to 2	42,747 people	25
2 to 3	84,731 people	25
3 to 4	94,446 people	25

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SECTION 8 CONCLUSIONS

A Johns-Manville plant operated in Marrero, Louisiana, between 1955 and 1965. The plant produced various types of ACMs, with the principal product being asphalt roofing material. An ACM by-product was generated by the plant. The by-product, in aggregate form, was pulverized in a hammer mill and mixed with a filler to form a roadbed-like material. This aggregate was then offered at no charge to local residents and governments (in the area that comprises the site) for driveways and right-of-way construction. Consequently, many driveways and rights-of-way in the surrounding neighborhood contain this waste material.

Two HWSAs were identified onsite based on the SI analytical results. Each area is estimated to measure 100 feet wide and 100 feet long, or 10,000 square feet.

The analytical results of samples collected as part of the SI indicate the airborne presence of asbestos fibers onsite; however, the concentrations detected are significantly below the EPA action level of 0.1 f/cc.

Concerns associated with the migration of hazardous constituents from the site and exposure pathways are summarized as follows:

- As discussed in Section 4, the groundwater pathway is of no concern because there are no identified groundwater targets within a 4-mile radius of the site. A release to the groundwater pathway is not suspected because of the low groundwater mobility potential of asbestos.
- As discussed in Section 5, the surface water pathway is of no concern because there are no identified surface water targets within the 15-mile TDL. A release to the surface water pathway is not suspected based on the distance to surface water and the state of deposition of the ACM on-site.
- As discussed in Section 6, the soil exposure pathway is not believed to be of concern since the HWSAs present onsite consist of asbestos which poses no dermal threat to individuals or the environment.
- As discussed in Section 7, the air pathway is of minimal concern. Based on the results of air sampling conducted during the SI, the asbestos concentrations detected onsite are significantly below the EPA action level.

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APPENDIX A
PHOTOGRAPHS

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APPENDIX B
DATA PACKAGE EXCERPTS

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RJ LeeGroup, Inc.

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713/584-0584 • FAX 713/584-0588

Report Date: 10/10/94
Page: 1 of 4

RJ Lee Job #: ATT410004
RJ Lee Client #: C00482

TO:

Weston
5599 San Felipe, Suite 700
Houston, TX 77056-2721

Tel: (713) 621-1620
Fax: (713) 621-6959

CLIENT PROJECT:

West Bank Asbestos
04603.023.029.2000
P.O. #11-6913
CLIENT JOB #:
ATT410004
RJ LEE GROUP Sample
#410010-30TT

ATTN: Jeff S. Wormser

LABORATORY ANALYSIS REPORT:

Summary of analytical transmission electron microscopy (ATEM) analysis, including x-ray microanalysis (EDS) and selected area electron diffraction (SAED) of twenty (20) samples taken from the West Bank Asbestos project. This report confirms facsimile results issued from RJ Lee Group to Jeff Wormser of Weston on Monday, October 10, 1994.

METHOD:

The procedure for the TEM/EDS/SAED analysis follows the NIOSH 7402 method, issued 8/15/87, revised 5/15/89, NIOSH Manual of Analytical Methods. Fiber identification was performed by the TEM method, utilizing X-ray microanalysis and selected area electron diffraction.

RESULTS:

Greater than six hundred liters of air was collected for each of the samples submitted and 25 mm diameter MCE air filter cassettes were used. Two asbestos structures were detected in sample AS-9 and sample AS-16. No asbestos structures were detected in the remaining samples submitted for analysis.



Paul A. Rease
Laboratory Director

0000001

RJ Lee Group-Houston
 Page: 2 of 4
 Client Job: West Bank Asbestos
 Project #: 04603.023.029.2000

Report Date: 10/10/94
 RJ Lee Sample #410010-30TT
 RJ Lee Job #: ATT410004

ASBESTOS STRUCTURES					
SAMPLE #	VOLUME (L)	STRUCTURES COUNTED	STRUCTURES/ MM2	STRUCTURES/ CC*	COMMENTS
AS-1	816 L	0	<14.29	<0.0067	3
AS-2	600 L	0	<14.29	<0.0092	3
AS-3	624 L	0	<14.29	<0.0088	3
AS-4	687 L	0	<14.29	<0.0080	3
AS-5	720 L	0	<14.29	<0.0076	3
AS-6	754 L	0	<14.29	<0.0073	3
AS-7	974 L	0	<14.29	<0.0056	3
FS-1	960 L	0	<14.29	<0.0057	3
AS-8	998 L	0	<14.29	<0.0055	3
AS-9	970 L	2	28.57	0.0113	2,3
AS-10	979 L	0	<14.29	<0.0056	3
AS-11	960 L	0	<14.29	<0.0057	3
AS-12	936 L	0	<14.29	<0.0059	3
AS-13	950 L	0	<14.29	<0.0058	3
FS-2	960 L	0	<14.29	<0.0057	3
AS-14	970 L	0	<14.29	<0.0057	3
AS-15	946 L	0	<14.29	<0.0058	3
AS-16	955 L	2	28.57	0.0115	2,3
AS-17	960 L	0	<14.29	<0.0057	3
AS-18	941 L	0	<14.29	<0.0058	3
LAB BLANK:	---	0	<14.29	---	

* = For the air volume sampled and filter area analyzed, a count of 1 fiber or structure is assumed in order to calculate the analytical sensitivity of 0.005 structures per cubic centimeter, which is reported as "less than" (<) if no structures are detected.

2 = Structure was determined to be chrysotile and amosite asbestos by EDS analysis, SAED qualitative analysis, and ultrastructural examination.

3 = The particulate load of the samples submitted for analyses is light.

Paul A. Reave
 Environmental Analyst

000289

0000002

RJ Lee Group-Houston
 Page: 3 of 4
 Client Job: West Bank Asbestos
 Project #: 04603.023.029.2000

Report Date: 10/10/94
 RJ Lee Sample #410010-30TT
 RJ Lee Job #: ATT410004

NON-ASBESTOS STRUCTURES					
SAMPLE #	VOLUME (L)	STRUCTURES COUNTED	STRUCTURES/ MM2	STRUCTURES/ CC*	COMMENTS
AS-1	816 L	0	<14.29	<0.0067	3
AS-2	600 L	0	<14.29	<0.0092	3
AS-3	624 L	3	<14.29	0.0264	1.3
AS-4	687 L	0	<14.29	<0.0080	3
AS-5	720 L	1	42.85	0.0076	1.3
AS-6	754 L	0	<14.29	<0.0073	3
AS-7	974 L	0	<14.29	<0.0056	3
FS-1	960 L	0	<14.29	<0.0057	3
AS-8	998 L	0	<14.29	<0.0055	3
AS-9	970 L	2	28.57	0.0113	1.3
AS-10	979 L	1	14.29	0.0056	1.3
AS-11	960 L	0	<14.29	<0.0057	3
AS-12	936 L	0	<14.29	<0.0059	3
AS-13	950 L	9	128.57	0.0526	1.3
FS-2	960 L	0	<14.29	<0.0057	3
AS-14	970 L	0	<14.29	<0.0057	3
AS-15	946 L	2	28.57	0.0116	1.3
AS-16	955 L	0	<14.29	<0.0058	3
AS-17	960 L	0	<14.29	<0.0057	3
AS-18	941 L	7	100.00	0.0409	1.3
LAB BLANK:	---	0	<14.29	---	

* = For the air volume sampled and filter area analyzed, a count of 1 fiber or structure is assumed in order to calculate the analytical sensitivity of 0.005 structures per cubic centimeter, which is reported as "less than" (<) if no structures are detected.

1 = Structures were determined to be non-asbestos (gypsum and kaolin) by EDS analysis, SAED qualitative analysis, and ultrastructural examination.

3 = The particulate load of the samples submitted for analyses is light.

Paul A. Reare
 Environmental Analyst

000290

0000003

RJ Lee Group-Houston
Page: 4 of 4
Client Job: West Bank Asbestos

Report Date: 2/22/94
RJ Lee Sample#: 410010-30TT
RJ Lee Job #: ATT410004

Date Samples Taken: October 3 - October 6, 1994
Date Samples Delivered to Lab: Thur., October 6, 1994
Client Requested Turnaround Time for Verbal Results: 48-72 Hr
Laboratory Turnaround Time for Verbal/Fax Results: <48 Hr

KEY:

Sample:

AS-1 (RJLG #410010-TT)
AS-2 (RJLG #410011-TT)
AS-3 (RJLG #410012-TT)
AS-4 (RJLG #410013-TT)
AS-5 (RJLG #410014-TT)
AS-6 (RJLG #410013-TT)
AS-7 (RJLG #410014-TT)
FS-1 (RJLG #410015-TT)
AS-8 (RJLG #410016-TT)
AS-9 (RJLG #410017-TT)

Sample:

AS-10 (RJLG #410018-TT)
AS-11 (RJLG #410019-TT)
AS-12 (RJLG #410020-TT)
AS-13 (RJLG #410021-TT)
FS-2 (RJLG #410022-TT)
AS-14 (RJLG #410023-TT)
AS-15 (RJLG #410024-TT)
AS-16 (RJLG #410025-TT)
AS-17 (RJLG #410026-TT)
AS-18 (RJLG #410027-TT)

LAB BLANK: (RJLG #410028-TT)
LAB BLANK: (RJLG #410029-TT)
LAB BLANK: (RJLG #410030-TT)

SUMMARY:

The samples had a light particulate load. Two asbestos structures were detected in sample AS-9 and sample AS-16. No asbestos structures were detected in the remaining samples submitted for analysis.

This report must not be used by Weston to claim product endorsement by NVLAP or any agency of the US Government. This test report relates only to the items described and tested herein.

The samples were analyzed by approved TEM method. This laboratory is in compliance with the quality specified by the method.


Environmental Analyst

000291

900-501

PRELIMINARY RESULTS

ATTN: Sctt Wiener

RJ LEE GROUP SAMPLE #'S: 410010-410030-TT

TEM

48-72 Hr

ANALYZED BY:

DATE/TIME

8:30 A.M.

Monroeville, PA • Berkeley, CA • Washington, D.C. • Raleigh, NC • Houston, TX
Chopra-Lee, Inc., Grand Island, NY

000292

14760 Memorial Drive • Suite 106 • Houston, TX 77079
713/584-0584 • FAX 713/584-0588

PRELIMINARY RESULTS

REPORT TO COMPANY: wjcs 100

ADDRESS:

CITY:

PHONE:

STATE:

FAX:

ZIP:

ATTN: Jeff Wiersma

PROJECT: West Bank Activities

RJ LEE GROUP JOB: A11410004

RJ LEE GROUP SAMPLE #'S:

TYPE OF ANALYSIS:

TEM

TURNAROUND TIMES:
(Circle One)

ASAP (4-8 Hr)

Within 12 Hr

~~Within~~ 24 Hr

48-72 Hr

SAMPLE ID #	DATE SAMPLE TAKEN	AIR VOLUME	# GRID OPENINGS	ANALYSIS RESULTS	S/MM ²	S/CC
AS-7	10/4/21	974	10	0 Asbestos Str.	< 14.28	< .0056
				0 Non-Asbestos Str.	< 14.28	< .0056
FS-1		960		0 Asbestos Str.	< 14.29	< .0057
				0 Non-Asbestos Str.	< 14.29	< .0057
AS-8		998		0 Asbestos Str.	< 14.29	< .0055
				0 Non-Asbestos Str.	< 14.29	< .0055
9		970		2 Asbestos Str.	28.57	.0113
				2 Non-Asbestos Str.	28.57	.0113
10		974		0 Asbestos Str.	< 14.29	< .0056
				1 Non-Asbestos Str.	14.29	.0056
11		960		0 Asbestos Str.	< 14.29	< .0057
				0 Non-Asbestos Str.	< 14.29	< .0057
	The Particulate Load is			Light		
	Non-Asbestos Structures are			Gypsum and Kaolin		
Amosite and Chrysotile	are present					

ANALYZED BY:

DATE/TIME 10/10/4 / 8:30 A.M.

Monroeville, PA • Berkeley, CA • Washington, D.C. • Raleigh, NC • Houston, TX
Chopra-Lee, Inc., Grand Island, NY

000293

14760 Memorial Drive • Suite 106 • Houston, TX 77079
713/584-0584 • FAX 713/584-0588

PRELIMINARY RESULTS

REPORT TO COMPANY: wEsTon
ADDRESS:

CITY:
PHONE:

STATE:
FAX:

ZIP:
ATTN: Jeff Winters

PROJECT: west Bank Asbestos
RJ LEE GROUP JOB: A1141006
RJ LEE GROUP SAMPLE #'S:

TYPE OF ANALYSIS:

TEM

TURNAROUND TIMES:
(Circle One)

ASAP (4-8 Hr)
Within 12 Hr
Within 24 Hr
48-72 Hr

SAMPLE ID #	DATE SAMPLE TAKEN	AIR VOLUME	# GRID OPENINGS	ANALYSIS RESULTS	S/MM ²	S/CC
AS-12	10/4/81	136	10	0 Asbestos Str.	< 14.29	< .0059
				0 Non-Asbestos Str.	< 14.29	< .0059
13	10/5/81	950		0 Asbestos Str.	< 14.29	< .0058
				9 Non-Asbestos Str.	124.57	.0526
FS-2		960		0 Asbestos Str.	< 14.29	< .0057
				0 Non-Asbestos Str.	< 14.29	< .0057
AS-14		970		0 Asbestos Str.	< 14.29	< .0057
				0 Non-Asbestos Str.	< 14.29	< .0057
15		946		0 Asbestos Str.	< 14.29	< .0058
				2 Non-Asbestos Str.	24.57	.0116
16	↓	955	↓	2 Asbestos Str.	24.57	.0115
				0 Non-Asbestos Str.	< 14.29	< .0058
	The Particulate Load is Light					
	Non-Asbestos Structures are			Gypsum and Kaolin		
Amosite and Chrysotile	are present					

ANALYZED BY:

DATE/TIME

10/10/4 / 8.30 a.m.

Monroeville, PA • Berkeley, CA • Washington, D.C. • Raleigh, NC • Houston, TX
Chopra-Lee, Inc., Grand Island, NY

000294

14760 Memorial Drive • Suite 106 • Houston, TX 77079
713/584-0584 • FAX 713/584-0588

PRELIMINARY RESULTS

REPORT TO COMPANY: Weston

ADDRESS:

CITY:

STATE:

ZIP:

PHONE:

FAX:

ATTN: Jeff Wernick

PROJECT: west Bank Asbestos

RJ LEE GROUP JOB: A11410064

RJ LEE GROUP SAMPLE #'S:

TYPE OF ANALYSIS:

TEM

TURNAROUND TIMES:
(Circle One)

ASAP (4-8 Hr)

Within 12 Hr

Within 24 Hr

48-72 Hr

SAMPLE ID #	DATE SAMPLE TAKEN	AIR VOLUME	# GRID OPENINGS	ANALYSIS RESULTS	S/MM ²	S/CC
AS-17	10/5/41	960	10	0 Asbestos Str.	< 14.29	< .0057
				0 Non-Asbestos Str.	< 14.29	< .0057
18	↓	941	↓	0 Asbestos Str.	< 14.29	< .0058
				7 Non-Asbestos Str.	100.00	.0109
Lab Blank	10/6/41	/	↓	0 Asbestos Str.	< 14.29	/
				0 Non-Asbestos Str.	< 14.29	/
Lab Blank	↓	/	↓	0 Asbestos Str.	< 14.29	/
				0 Non-Asbestos Str.	< 14.29	/
Lab Blank	↓	/	↓	0 Asbestos Str.	< 14.29	/
				0 Non-Asbestos Str.	< 14.29	/
				Asbestos Str.		/
				Non-Asbestos Str.		/
	The Particulate Load is Light					
	Non-Asbestos Structures are			Gypsum and Koolin		
Amosite and	chrysotile	are	present			

ANALYZED BY:

DATE/TIME 10/10/4 / 8:30 AM

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Chopra-Lee, Inc., Grand Island, NY

000295

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

48-72 Hrs.

Sample #'s 410010-410020
CHAIN OF CUSTODY RECORD

REGION 6
First International Bldg., 1201 Elm St.
Dallas, Texas 75270

PAGE 1 of 2

PROJ. NO. 04603 023 019 2000		PROJECT NAME WEST BANK ASBESTOS		NO. OF CONTAINERS		REMARKS	
SAMPLERS: (Signature) <i>[Signature]</i>							
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	TEMPERATURE (°C)	WIND DIRECTION (°)
AS-1	10/3/94	1855		X	(b) (6)	816	Background
AS-2	10/3/94	1920		X	(b) (6)	600	(b) (6)
AS-3	10/3/94	1939		X	(b) (6)	624	(b) (6)
AS-4	10/3/94	1923		X	(b) (6)	687	(b) (6)
AS-5	10/3/94	1955		X	(b) (6)	720	(b) (6)
AS-6	10/3/94	2004		X	(b) (6)	754	(b) (6)
AS-7	10/4/94	1746		X	(b) (6)	974	Background
FS-1	10/4/94	1746		X	(b) (6)	960	See LOGBOOK
AS-8	10/4/94	1800		X	(b) (6)	992	(b) (6)
AS-9	10/4/94	1801		X	(b) (6)	970	(b) (6)
AS-10	10/4/94	1817		X	(b) (6)	979	(b) (6)
AS-11	10/4/94	1820		X	(b) (6)	960	(b) (6)
AS-12	10/4/94	1830		X	(b) (6)	936	(b) (6)
AS-13	10/5/94	1730		X	(b) (6)	950	Background
FS-2	10/5/94	1730		X	(b) (6)	960	See LOGBOOK

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 10/5/94 1900	Received by: (Signature) <i>[Signature]</i>	Date / Time 10/6/94 10:00 AM	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: Laboratory by: (Signature)	Date / Time	Remarks		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

000296

48-72 Hrs.

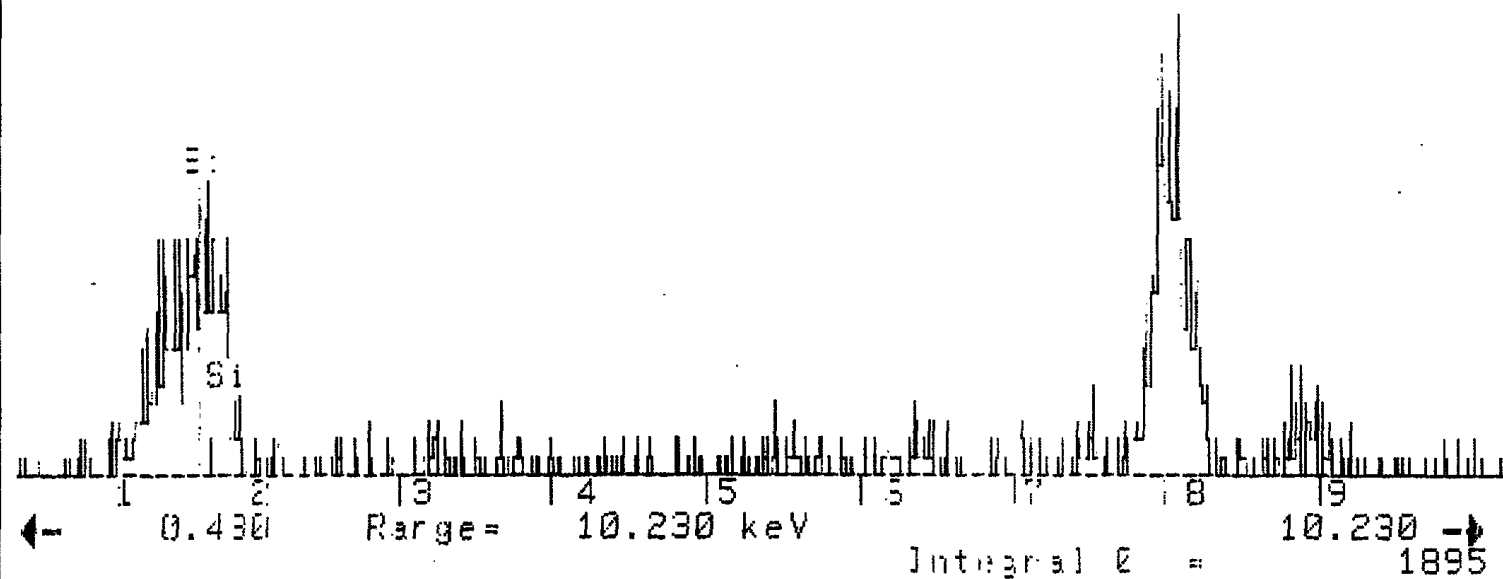
NI 471000T
Sample #s 410010 - 410020-TT
CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

000297

C-10550

7-Oct-1995 12:33:40 Z= 14 Si <
 ATT410024 WESTON WEST BANK
 AS-3-2-1 KAOLIN Preset= Off
 Vert= 50 counts Disp= 1 Elapsed= 6 secs



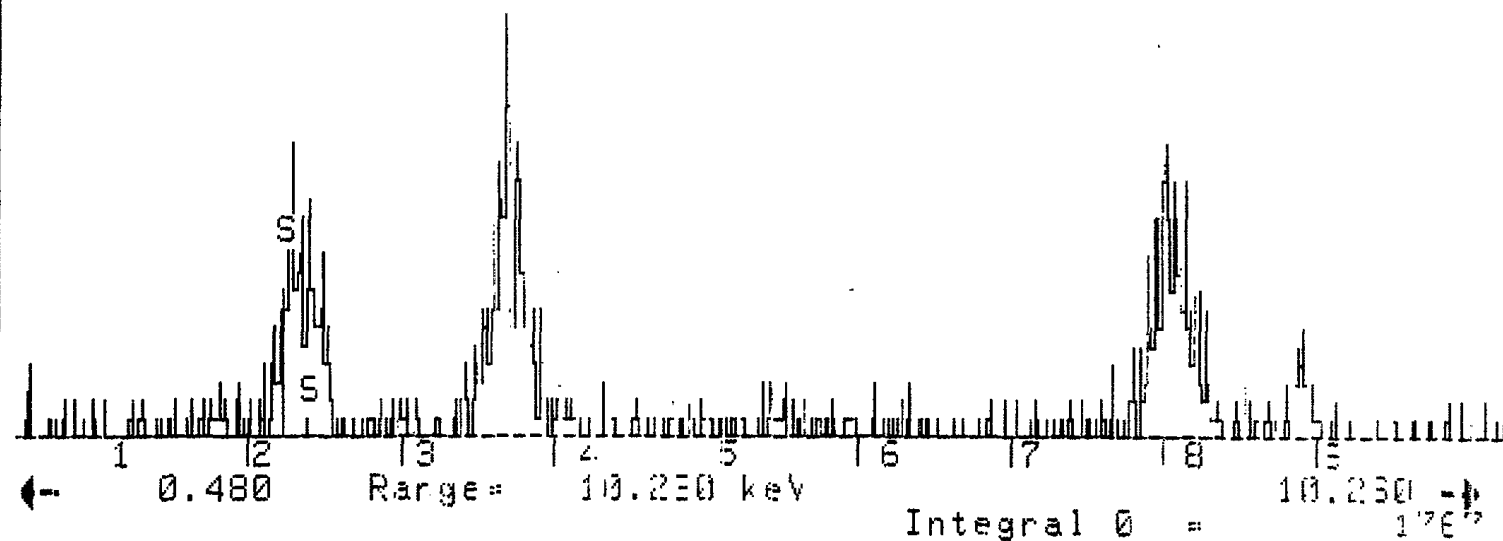
000298

000010

7-Oct-1995 12:35:46
ATT410004 WESTON WEST BANK
AS-3-5-2 GYPSUM
Vert= 50 counts Disp= 1

Z= 15 S K

Preset= Off
Elapsed= 5 secs



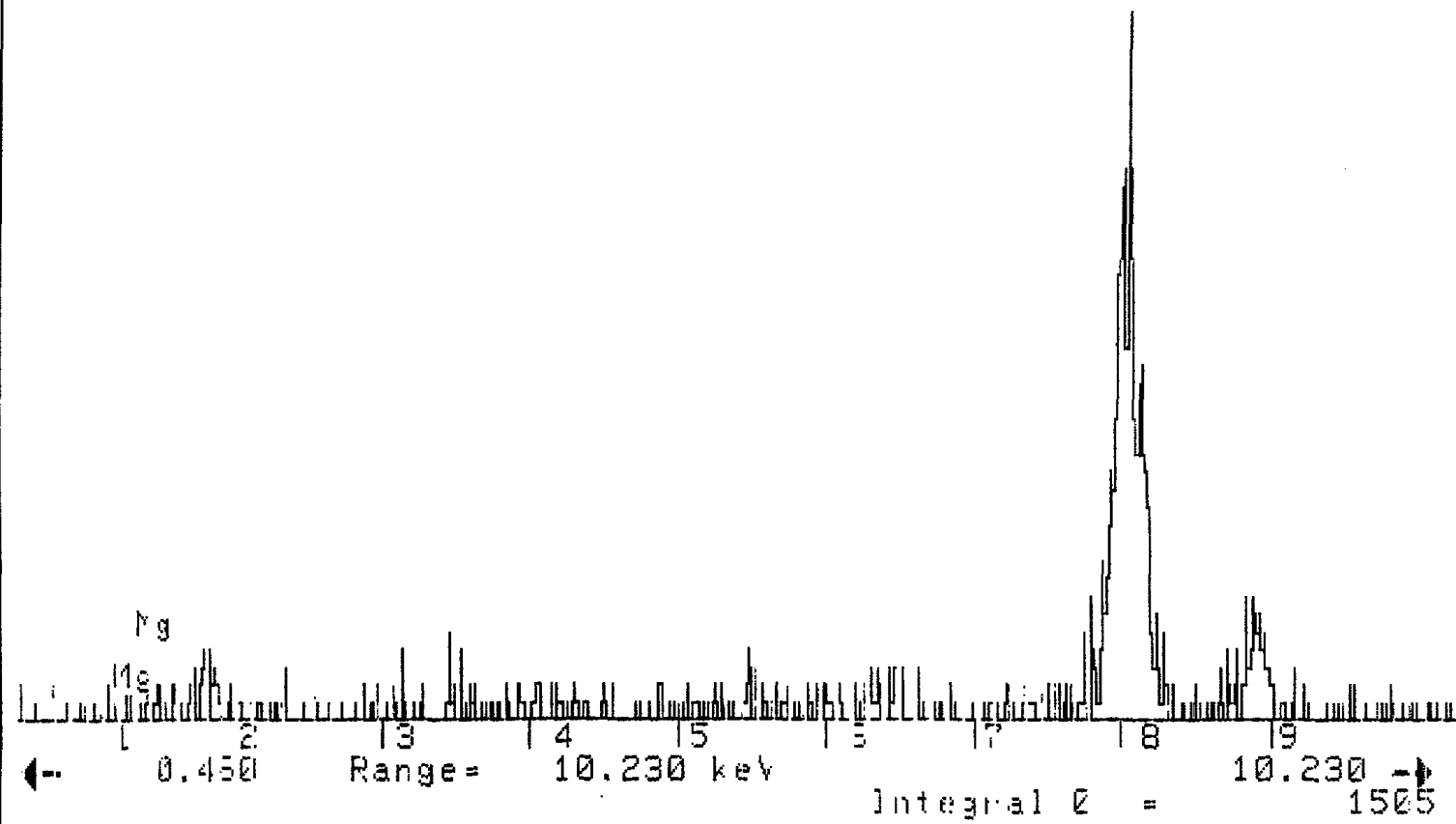
000299

000000

7-Oct-1995 15:04:09
ATT410004 WESTON WEST BANK
AS-9-7-3 CHRYSOTILE
Vert= 50 counts Disp= 1

Z= 12 Mg K

Preset= Off
Elapsed= 23 secs



000300

0000012